Department of Energy Nuclear Science User Facilities Awards 11 Rapid Turnaround Research Proposals

IDAHO FALLS -- The U.S. Department of Energy (DOE) Nuclear Science User Facilities (NSUF) (formally Advanced Test Reactor National Scientific User Facility) has selected 11 new rapid turnaround experiment (RTE) projects, totaling up to $550,000. These projects will advance research in nuclear fuels and help extend the lifetime of structural components in nuclear systems.

The NSUF, first established at the Idaho National Laboratory (INL), is the nation's only designated nuclear energy user facility. NSUF provides research teams with cost-free access to reactor, post-irradiation examination and beamline capabilities at a diverse mix of affiliated partner facilities in university, national laboratory and industry institutions across the country.

NSUF competitively selected the 11 RTE projects from a pool of 17 high quality proposals submitted during the solicitation period. Each proposal was evaluated based on a variety of factors including feasibility, programmatic relevance and scientific-technical merit. All reviews were then passed through a panel committee before the proposals were placed in their final ranking positions.

Research teams from INL, Boise State University, University of Florida, Oak Ridge National Laboratory, University of Tennessee, University of Wisconsin-Madison, University of Manchester, and University of Oxford will work with the NSUF on their proposed experiments. The newly awarded RTE projects are:

Principal Investigator	Proposal Title	Institution	Facility Used	Facility Location
Assel Aitkaliyeva	Correlating mechanical properties and plastic deformation microstructure in irradiated steels	INL	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Janelle Wharry	Proton Irradiations of Alloys Fabricated by Powder Metallurgy and Hot Isostatic Pressing	Boise State University	University of Michigan, Michigan Ion Beam Laboratory	Michigan
Yong Yang	Characterization on the Bor-60 neutron irradiated austenitic stainless steels and cast stainless steel	University of Florida	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Gilles Youinou	Isotopic ratio measurements in	INL	INL Analytical Laboratory	Idaho

	MANTRA irradiated samples			
Philip Edmondson	Atom probe tomography evaluation of irradiated and annealed RPV surveillance specimens from the R. E. Ginna reactor	ORNL	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Chris Wetteland	Irradiation Effects on Structure and Properties of LWR Concrete	University of Tennessee	University of Wisconsin Ion Beam	Wisconsin
Samuel Briggs	Investigation of precipitate formation kinetics and interactions in FeCrAl alloys	University of Wisconsin	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Grace Burke	Characterization of Irradiation-Induced Nanoscale Features in Model RPV Steels using Advanced Analytical Electron Microscopy	University of Manchester	INL Electron Microscopy Laboratory	Idaho
Janelle Wharry	Characterizing Si-Ni-Mn clustering in ion irradiated Fe-9Cr ODS alloy	Boise State University	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Kris Bhojwani	Investigating alpha prime precipitation in a neutron irradiated NFA (Nanostructured Ferritic Alloy)	University of Oxford	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho
Chad Perish	An atom probe tomography investigation of the response of oxide-dispersion nanoclusters to non-similar friction stir welds	ORNL	Center for Advanced Energy Studies, Microscopy and Characterization Suite	Idaho

The NSUF reviews RTEs three times per year. The call is open to any interested researcher from a university, national laboratory or industry. Each RTE is not to exceed $50,000 and the awards offer researchers the opportunity to perform short-term analyses of a limited scope of work, use of an ion beam or use of the North Carolina State University PULSTAR reactor. The 11 RTE

awards being announced today were submitted during the previous call, which began in October 2014 and closed in January 2015. The next call for solicitations is currently open and scheduled to close May 28, 2015.

For user guides and more information about submitting proposals, visit the NSUF website at http://atrnsuf.inl.gov.

INL is a DOE multi-program national laboratory, and performs work in each of DOE's strategic goal areas: energy, national security, science and environment. INL is the nation's leading center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

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